

WHAT IS CLAIMED IS:

1        1. A circular saw comprising:  
2                a housing;  
3                a motor disposed within said housing and configured for rotating a  
4        circular saw blade rotatably driven by said motor;  
5                a foot; and

6                a saw blade depth adjustment detent mechanism pivotally  
7        interconnecting said foot to said housing such that the circular saw blade is adjustable  
8        to said foot through a range of saw blade depths relative to said foot, said saw blade  
9        depth adjustment detent mechanism including a saw blade depth detent with a second  
10      member having a plurality of spaced saw blade depth recesses, each recess being  
11      engageable with said saw blade depth detent to provide predetermined saw blade  
12      depth settings within said range of saw blade depths.

1        2. The circular saw of claim 1 further comprising a bevel angle adjustment  
2        detent mechanism pivotally interconnecting said foot to said housing such that the  
3        circular saw blade is adjustable to said foot through a range of bevel angles.

1        3. The circular saw of claim 2 wherein said bevel angle adjustment detent  
2        mechanism including a detent holding assembly carrying a bevel angle detent and an  
3        arcuate member defining a plurality of spaced bevel angle recesses each matingly  
4        engageable with said bevel angle detent to provide predetermined bevel angle settings  
5        within said range of bevel angles.

1        4. The circular saw of claim 1 further comprising a spring for biasing said  
2        saw blade depth detent against said second member.

1        5. The circular saw of claim 4 further comprising:

2                   a bracket connected to said housing;  
3                   a bolt connected to said bracket and having multiple spring attachment  
4                   positions for an end of said spring to provide a range of spring tensions for biasing  
5                   said saw blade depth adjustment detent mechanism against said bracket.

1                 6.    The circular saw of claim 1 wherein said saw blade depth detent has a  
2                   ridge configured for engaging said plurality of spaced saw blade depth recesses.

1                 7.    The circular saw of claim 1 wherein said saw blade depth detent is  
2                   formed of a plastic material.

1                 8.    The circular saw of claim 1 further comprising a locking lever generally  
2                   perpendicular to an axis of rotation of the circular saw blade and configured for  
3                   locking the saw blade in a fixed position relative to said foot.

1                 9.    The circular saw of claim 4 wherein said spring has a first end engaging  
2                   said saw blade depth detent and a second end engaging a bolt passing through said  
3                   saw blade depth detent and fixed to said housing.

1                 10.   The circular saw of claim 1 wherein said second member is a depth of  
2                   cut bracket mounted to said foot.

1                 11.   The circular saw of claim 10 wherein said plurality of recesses are V-  
2                   shaped and positioned relative to one another at one of 1/8 inch, 1/4 inch, and 1/2 inch  
3                   spaced intervals on said depth of cut bracket.

1                 12.   A circular saw comprising:  
2                   a housing;

3                   a motor disposed within said housing and configured for rotating a  
4    circular saw blade rotatably driven by said motor;

5                   a foot;

6                   a bevel angle adjustment detent mechanism pivotally interconnecting  
7    said foot to said housing such that the circular saw blade is adjustable to said foot  
8    through a range of bevel angles, said bevel angle adjustment detent mechanism  
9    including a detent holding assembly carrying a bevel angle detent and an arcuate  
10   member defining a plurality of spaced bevel angle recesses each matingly engageable  
11   with said bevel angle detent to provide predetermined bevel angle settings within said  
12   range of bevel angles; and

13                  a saw blade depth adjustment detent mechanism pivotally  
14   interconnecting said foot to said housing such that the circular saw blade is adjustable  
15   to said foot through a range of saw blade depths relative to said foot, said saw blade  
16   depth adjustment detent mechanism including a saw blade depth detent with a second  
17   member having a plurality of spaced saw blade depth recesses, each recess being  
18   matingly engageable with said saw blade depth detent to provide predetermined saw  
19   blade depth settings within said range of saw blade depths.

1                  13. The circular saw of claim 12 wherein said bevel angle detent is a  
2    generally L-shaped member having a first end configured for engaging said plurality  
3    of spaced bevel angle recesses and a notched second end adjacent said foot.

1                  14. The circular saw of claim 13 wherein said detent holding assembly  
2    includes a mounting bracket engageable with a locking lever configured for locking  
3    said mounting bracket at a bevel angle upon a rotation of said housing relative to said  
4    foot.

1                  15. The circular saw of claim 14 wherein said mounting bracket has a  
2    manual override leaf spring configured for engaging said notched second end of said

3 bevel angle detent so as to prevent said bevel angle detent from matingly engaging  
4 said plurality of spaced bevel angle recesses.

1 16. The circular saw of claim 15 wherein said notched second end has two  
2 notches, and wherein one of said two notches is adjacent said mounting bracket and  
3 configured for disengaging said bevel angle detent from said arcuate member.

1 17. The circular saw of claim 14 wherein said detent holding assembly  
2 includes a quadrant bracket in operational relationship with said mounting bracket and  
3 said locking lever.

1 18. The circular saw of claim 17 wherein said quadrant bracket includes  
2 said plurality of spaced bevel angle recesses defining said range of bevel angles, and  
3 wherein said range of bevel angles includes 0, 15, 22.5, 30, 45, and 50 degrees.

1 19. The circular saw of claim 14 further comprising an axial member  
2 connected to said mounting bracket and having said bevel angle detent rotatably  
3 mounted thereto.

1 20. The circular saw of claim 12 further comprising a spring for biasing said  
2 bevel angle detent toward said arcuate member.

1 21. A circular saw comprising:  
2 a housing;  
3 a motor disposed within said housing and configured for rotating a  
4 circular saw blade rotatably driven by said motor;  
5 a foot having a generally flat bottom surface;  
6 a saw blade depth adjustment detent mechanism pivotally  
7 interconnecting said foot to said housing such that the circular saw blade is adjustable

8 to said foot through a range of saw blade depths relative to said foot, said saw blade  
9 depth adjustment detent mechanism including a first member aligning a saw blade  
10 depth detent with a second member defining a plurality of spaced saw blade depth  
11 recesses each matingly engageable with said saw blade depth detent to provide  
12 predetermined saw blade depth settings within said range of saw blade depths; and

13                   a bevel angle adjustment detent mechanism pivotally interconnecting  
14 said foot to said housing such that the circular saw blade is adjustable to said foot  
15 through a range of bevel angles, said bevel angle adjustment detent mechanism  
16 including a detent holding assembly carrying a bevel angle detent and an arcuate  
17 member defining a plurality of spaced bevel angle recesses each matingly engageable  
18 with said bevel angle detent to provide predetermined bevel angle settings within said  
19 range of bevel angles.

1                   22. A circular saw comprising:

2                   a housing;

3                   a motor disposed within said housing and configured for rotating a  
4 circular saw blade rotatably driven by said motor;

5                   a foot;

6                   a bevel angle adjustment detent mechanism pivotally interconnecting  
7 said foot to said housing such that the circular saw blade is adjustable to said foot  
8 through a range of bevel angles, said bevel angle adjustment detent mechanism  
9 including a detent holding assembly carrying a bevel angle detent biased toward an  
10 arcuate member defining a plurality of spaced bevel angle recesses each matingly  
11 engageable with said bevel angle detent to provide predetermined bevel angle settings  
12 within said range of bevel angles.

1                   23. The circular saw of claim 22 further comprising a bracket connected to  
2 said housing and having multiple spring connecting positions to provide a range of  
3 spring tensions for biasing said bevel angle detent against said arcuate member.

1           24. The circular saw of claim 22 further comprising a spring for biasing said  
2 bevel angle detent toward said arcuate member.

1           25. The circular saw of claim 22 wherein said bevel angle detent is a  
2 generally L-shaped member having a first end configured for engaging said plurality  
3 of spaced bevel angle recesses and a notched second end adjacent said foot.

1           26. The circular saw of claim 25 wherein said detent holding assembly  
2 includes a mounting bracket engageable with a locking lever configured for locking  
3 said mounting bracket at a bevel angle upon a rotation of said housing relative to said  
4 foot.

1           27. The circular saw of claim 26 wherein said mounting bracket has a  
2 manual override leaf spring configured for engaging said notched second end of said  
3 bevel angle detent so as to prevent said bevel angle detent from matingly engaging  
4 said plurality of spaced bevel angle recesses.

1           28. The circular saw of claim 27 wherein said notched second end has two  
2 notches, and wherein one of said two notches is adjacent said mounting bracket and  
3 configured for disengaging said bevel angle detent from said arcuate member.

1           29. The circular saw of claim 26 wherein said detent holding assembly  
2 includes a quadrant bracket in operational relationship with said mounting bracket and  
3 said locking lever.

1           30. The circular saw of claim 29 wherein said quadrant bracket includes  
2 said plurality of spaced bevel angle recesses defining said range of bevel angles, and  
3 wherein said range of bevel angles includes 0, 15, 22.5, 30, 45, and 50 degrees.

1           31. The circular saw of claim 26 further comprising an axial member  
2 connected to said mounting bracket and having said bevel angle detent rotatably  
3 mounted thereto.